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DEVOTED TO

AGRICULTURE, HORTICULTURE AND THE HOUSEHOLD ARTS.

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CHARLES T. BOTTS, EDITOR.

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THE SOUTHERN PLANTER;

Devoted to Agriculture, Horticulture, and the Household Arts.

Agriculture is the nursing mother of the Arts. *Xenophon.*

Tillage and Pasturage are the two breasts of the State.—*Sully.*

C. T. BOTTS, Editor.

VOL. IV. RICHMOND, JANUARY, 1844. No. 1.

For the Southern Planter.

POUDRETTE.

Mr. Editor,—I have just laid down the last number of the Southern Planter, in which I find two very different accounts of the effects of the poudrette manure; one from Dr. Garland, of Fredericksburg, the other from Messrs. Newman & Henshaw, of Orange. To each of these pieces I find a request annexed, that others who have tried experiments with it, would give you the result. I thus feel called upon, not only in justice to you, but to the community at large, to give the result of my experience.

You will recollect that I purchased a barrel of it of you last spring, probably of the same lot out of which you furnished the gentlemen referred to, with which I made various experiments on peas, corn, oats, &c., and I regret to say that there was not a single instance in which I could see more effect than would have been produced by the same amount of common swamp earth; and I must acknowledge that, from its being perfectly inodorous, and resembling so much the common deposit about our swamps, I had strong suspicions of its not being what it professed to be. But fearing that the fault was with me, and that I might do injustice to others, I did not intend mentioning publicly, either the result or my suspicions; nor should I have done so now, but for the call made by you, the result of other experiments, and the suspicions awakened in other minds. Nor would I be understood, even now, as condemning the article, or as censuring those who furnished you with it; for the past season has certainly been a bad one for trying agricultural experiments, and you know that new hands are apt to be awkward and unsuccessful in their first attempts at any thing.

I have reserved a part of my purchase for further experiments, the result of which, if necessary, will be given in due time—and should they be more favorable than the past, it will afford me much pleasure, as a matter of justice to the venders, to testify to its genuineness and value.

Very respectfully, your friend,

JOHN COOKE.

Dewberry, Nov. 1, 1843.

We have received several other statements, both verbal and written, from the most respectable sources, all going to show the inferiority, if not the utter worthlessness, of the article furnished us last spring by Mr. D. K. Minor, of New York, and sold by us under the name of POUDRETTE. It is true, we have heard some expressions of more favorable opinions than those we have published, but they have been few and far between, and the balance of testimony against the article, has been overwhelming. The communications in the November number and our comments upon them, have drawn the following from Mr. Minor, which we are sorry to have received too late for the December number:

New York, November 25, 1843.

C. T. BOTTS, ESQ.

Dear Sir,—I observe in the November number of the Southern Planter, two communications in relation to the use of poudrette, in Virginia, during the past season, which you say was obtained from the Company under my direction. In one of those communications the results are spoken of as highly satisfactory, and in the other directly the reverse, notwithstanding you say that used by the committee, and "so unequivocally condemned, was *a part of the same lot* with that so highly lauded by Dr. Garland."

On referring to our books I find that we shipped to you, in March last, 34 barrels, viz: on the 15th, 20 barrels, and on the 30th, 14 barrels—both of which lots were packed from a binn which contained over 5,000 bushels on the 1st of December previous, and of a quality *as uniform as we could make it* from the contents of a large number of sinks.

It is our *aim* to make a *good* article *always*; and of a quality as uniform as possible; but perfect uniformity is out of the question, as the manner of constructing, and taking care of, the receptacles for the *material* is as various as the manner of cultivating the soil; and it is not quite as easy to separate the *valueless* from the good material, as it is to assort apples and peaches, therefore, we not unfrequently throw away *entire* loads of it after hauling it two miles or more, that we may not deteriorate the good

article. Our *city laws* impose a penalty for using the sink for other than its *legitimate* purposes—yet we find them the receptacles of *every* thing which servants desire to put out of sight, or are too indolent to otherwise dispose of, according to our city regulations, including *ashes*, *broken crockery* and *glass*, *rags*, and old *shoes*, and sometimes silver plate, gold and silver coin and bank notes; and we have found the *dies*, and *plates* for *counterfeiting coin* and *bank notes*. We do not however intend, or desire, to have any of these things remain in the poudrette when it goes to the farmer; and to remove as much of them as is possible we pass it through *two* screens, one flat, made of iron rods, three-fourths of an inch apart to take out all the coarse trash and pulverise the lumps preparatory to passing it through a *revolving* screen of wire-cloth with four meshes to the square inch; yet notwithstanding this double screening I have occasionally found pieces of glass when packing the barrels, over an inch in length and half an inch wide, which must have passed through the wire-cloth screen, and even ten-penny nails have passed through it. I go thus into detail, sir, to show that we use *due care* to remove all foreign substances, though we are not always entirely successful.

Your correspondents, Messrs. Newman & Hensbaw, say "there was nothing in the appearance of the article obtained by us that indicated its true character but the fragments of broken bottles, glass, earthenware, &c. &c. found in it."

I have explained above how such materials remain in the poudrette, yet I have no hesitation to say that I will give your correspondents *two* barrels of poudrette for each *half pint* of "glass and crockery" which shall be found in any *one* barrel packed by us, if examined in *your* presence, or any other gentleman selected by you. We could not afford to sell them glass at thirty, nor fifty cents a bushel, as it is worth much more, and is picked out with much care and sold, especially white glass.

In your remarks you say, "In justice to Mr. Minor, the Agent of the Company, it is proper to state that the article here so unequivocally condemned was a part of the same lot so highly lauded by Dr. Garland in another part of this number." I thank you, sir, for that acknowledgment; and if you had omitted one or two other remarks I should have been willing to let the subject rest upon these two statements, directly at variance with each other though they are; but as you add, in the same paragraph, "there can, however, be no mistake about the article tried by this committee; it is utterly impossible that genuine poudrette should be inoperative. It may be that a real and a spurious article have been sent us." If, as you say, it was of the same lot as that had by Dr. Garland, then I assure you that it was *as near like it* as would be an equal quantity of wheat, or oats, taken at the same time, from a binn containing 5,000 bushels raised on many different farms, and so spread, in putting it up, as to endeavor to have it come out of a uniform quality—and had it been used under similar circumstances as the other, the result would, I have not a doubt, been similar to that used by Dr. G.; and had the committee used the *four* barrels, *as* they did the two, their report would, in all probability, have been similar to that now made by them.

I have had numerous reports of unfavorable results from the use of *one* or *two* barrels—and yet those persons, or some of them, are now large purchasers—after having witnessed its effects on their neighbors' crops—and one gentleman, on Long Island, who used it in 1841, in considerable quantity, not only got no benefit the *first* year, from its use on his corn, but actually lost his crops, and for the simple reason that he used "a *gill to the stalk*," instead of a gill, or *gill and a half* to the hill, as advised by us. He did not, however, get angry and accuse us of fraud, but he investigated the matter, and learned how to use it; and has, this past year, used what has cost him over $200—with results entirely satisfactory, as he informed me by letter, in which he said that his wheat yielded thirty-six bushels, weighing 62½ lbs. to the bushel, per acre where he used poudrette; and his corn would be an *extraordinary* crop, but as it was not gathered he could not give particulars.

Your correspondents say that "it was applied in the month of April to wheat at the rate of twenty bushels to the acre; to oats when sowed and harrowed in, at the rate of twenty-five bushels to the acre; to early peas very heavily when sowed, and just before they bloomed; to cabbage plants in the bed, and some time after they had been transplanted; to beets, potatoes and vines, very heavily; to corn, when planted and at several stages of its growth, at the rate of a gill to a single stalk; and to tobacco, in June and July, at the same rate to the hill; and in *no instance* could the slightest benefit be observed." This, I admit, is very singular, and well calculated to try the patience of experimenters—but it does not prove that *poudrette* is not an exceedingly valuable manure, nor that we have practiced a fraud upon you and your friends; as in nine cases out of ten, during the past six years that I have sold the article, the results, and reports, have been of an entirely different character. It simply proves that, under *some* circumstances, it does not produce the desired results; and that we have not yet had sufficient experience in its use to know beforehand *where* and *when* it will be of little, or much value—and I will, in all fairness, submit to you and your readers, whether an experiment, on so

many different crops, with so small a quantity, only *eight* bushels, should be put forth as one upon which the *merits* of the article should be judged? Is not the opinion of practical farmers, who have used it for several years, in large quantities, more safely to be relied on? I will mention a few instances where it has been used the past season by those who have thoroughly tested its value. One gentleman purchased four hundred bushels this year, after having used one hundred bushels annually for four years; another, who had used *five hundred* bushels annually for four years past, purchased this year *six hundred* bushels; and another has had seven hundred and fifty bushels this year, who had used nearly *three thousand* bushels within the past five years. These gentlemen have used it on all the variety of crops raised by our northern farmers, and with results which will induce them to use it hereafter, if they can obtain it. I make these statements to show that where poudrette has been *properly* tested it is *justly* estimated.—Unfavorable reports, from the use of *one* or *two* barrels may deter a few from using it for a year or two, yet the demand will increase faster than the supply. Those who have used it most extensively, and for the longest period, have not always observed the same effect on different fields the same year, yet they usually observe it sooner or later, and I should be gratified if your correspondents will plant corn next year where they used it this year on oats and corn. Will you suggest it to them?

I regret that any gentleman should be disappointed in the effects of a single experiment, and especially at the South, or so far from the manufactory—as one failure usually does more injury than *ten* successful experiments can counteract. *Failures* are reported often, whilst success is merely enjoyed, or occasionally spoken of by those who witnessed the results.

This enterprise has had uncommon difficulties to encounter from its commencement; prejudice, *opposition*, *detraction* and *malice* have done their worst, and still I have gradually, but *steadily* progressed; and the demand has constantly increased, and *will* increase until the contents of all the sinks in the country will be preserved *with as much care* as the farmer preserves his *oats* or *potatoes* when they are raised.

Your correspondents say they "are forced to the conclusion that you were made, in this instance, the unconscious instrument of imposing upon them a spurious article"—and you appear to come to the same conclusion in your closing remarks. In reply, I have only to say, that my *aim* has *ever* been to deal justly with my fellowmen; and I have not, that I am aware of, in *any* instance deviated from my rule in this business—nor do I believe that my superintendent, in charge of the manufactory, has ever intentionally, *or knowingly* sent out a spurious article. He certainly has no interest in doing so; nor have those under him—and, as for myself, extensively and permanently engaged in the business, my *interest*—if no *higher* motive actuated me—certainly prompts me to send a good article, and especially so, when we send to sections of country where it has not been before introduced—as, upon its *reputation*, depends my success. If, therefore, they or you, or any other person casts upon me or my superintendent, the imputation of sending, *designedly* or *knowingly*, a spurious article when we profess to send poudrette, I throw it back with scorn and contempt.

I am, sir, respectfully yours,

D. K. Minor.

We do not object to the strong and indignant manner in which Mr. Minor repels the supposed imputation of fraud: it is just such a feeling as we should expect such a charge would create in an honest mind, and it only strengthens our conviction that Mr. Minor has been "more sinned against than sinning." We never supposed that Mr. Minor had been guilty of fraud in this matter; we know very little about him, personally, but every thing we ever heard has been complimentary to him as a man of honor and a gentleman; therefore it was, that satisfied as we were, and are, that a spurious article had been sent us by Mr. Minor last spring, and feeling certain that a *fraud* had been committed somewhere, we felt much rather inclined to attribute it to those connected with Mr. Minor, of whom we knew nothing, than to Mr. Minor himself, of whom, particularly from a most respected friend of our own in this city, we had heard a very high character. Against the gentleman whom Mr. Minor calls his *superintendent*, and whose defence he so warmly espouses, we of course mean to say nothing, because of him we know as little as we do of the man in the moon; but we can never believe that an article "totally inefficacious" has, *by accident*, been substituted for *poudrette*. It is enough for us to acquit Mr. Minor of any participation in the fraud, of which we doubt not that he as well as we have been the victims: for us to trace it and point out the persons with whom it originated, is neither to be required nor expected.

We certainly have no interest in making these exposures. In the first place, it must be any thing but agreeable to us to be thus forced to condemn an article which may be the means of livelihood to another, and in this particular instance, as the agent of Mr. Minor, we sustain

a pecuniary loss in exposing the worthlessness of this, so called, poudrette. But we should be recreant to every principle of honor, if we permitted either of these considerations to influence us into a betrayal of the trust and confidence reposed in us by our subscribers. It is true, that in addition to our editorial labors, we have taken upon ourselves the responsibility of an agricultural agency, and in this department we freely offer our services to the public; but if any inventor, or other individual, thinks the one character is to be made subservient to the other; if he thinks, because we can make money out of the success of an article, we will gloss it over in our columns, or even be silent upon its demerits when we know them, much less exclude from our pages the fullest and freest discussion, we tell him plainly he has mistaken his man, and he had better look elsewhere for a customer. We do not mean that we will be responsible for all that appears in the paper, but we do mean that we would be unworthy the position we hold towards the agricultural community, not only if we imposed on them ourselves, but if we willingly and knowingly permitted others to do so.

For the Southern Planter.

EMIGRATION TO VIRGINIA.

Mr. Editor,—In the last number of the Southern Planter you quote from a writer of the State of New York, who has recently visited Fairfax for the purpose of "spying out" the land and making arrangements for the emigration of a company of his friends to Virginia; he speaks in very high terms of the natural advantages of that portion of our State, and also of the low price of the lands, from ten to fifteen dollars per acre. Now, sir, without at all intending to disparage *that* portion of our State, I would remark that if I am correctly informed of its advantages, it does not at all compare with other portions of the State which have hitherto escaped the notice of our vigilant and enterprising friends of New York. Fairfax is, I believe, totally destitute of that great fertilizer, marl, or lime, in any shape. The markets are not more convenient than other localities, or better for the sale of agricultural products; and as to the price of land, I have no hesitation in believing that the lands alluded to cost from two to three times as much as others which I will name, possessing advantages very superior. Why have not our Northern friends, with their usual foresight and sagacity, looked a little farther south, before they located? The whole country in the neighborhood of PETERSBURG is more or less supplied with rich marl, easy of access, the application of which will increase the product from fifty to one hundred per cent. the first crop; and the increasing and permanent effects of which are too well established to require any comment. Within the last two years, and within the distance of five miles of this town, lands possessing these advantages, have sold even as low as two dollars, and I believe there would be no difficulty in buying them at this time at from five to ten dollars. The neighborhood is healthy, independent of the healthful influence which the application of marl is known to exert. Let our Northern friends come on and see for themselves the astonishing effects which are produced by the application of marl; the lands beautifully undulating for improving—its healthfulness—the contiguity to a most flourishing town—these I believe would be considered sufficient inducements to give some current of emigration to our surrounding country.

I have no personal interests to subserve in these remarks, but it has been a matter of surprise with me that these lands should have been so long overlooked. We should be pleased to see a company of such farmers as New York could send us, make a lodgement amongst us, and we believe the advantages, a few of which have been named, cannot long remain unobserved, and must soon be properly appreciated. There is already a growing spirit of agricultural improvement amongst us.

Respectfully, W. J. D.

Petersburg, Nov. 18, 1843.

P. S.—The Editor of the Albany Cultivator will oblige the author by copying the above.

OXEN.

We observe, that at the ploughing match of the American Institute at Patterson, New Jersey, the premium was again taken by a plough drawn by a yoke of oxen, driven by the ploughman; they accomplished their task, the eighth of an acre, in nineteen minutes, beating the horse teams, easily. Either our horses at the South are much better, or our oxen are much inferior, to those of our northern friends.

BREEDERS' CONVENTION.

We anticipated a great deal of valuable information from the assemblage of breeders, which, according to previous invitation, met at New York on the 17th of October. Animals are valued for the degrees in which they possess certain qualities, as tendency to fatten, to give milk, &c., and these qualities are supposed, and no doubt to a certain extent correctly supposed, to

be indicated by the outward conformation of the animal. As to what is the character of this outward conformation, we know that very loose and indefinite ideas prevail amongst the community in general; but it was not upon this head that we expected to be enlightened by this Convention. Professor Cline and others we supposed had long ago taught pretty much all that could be learned from *books* upon this subject. Indeed, we had imagined that as to what were good, and what were bad points, what it was desirable to obtain, and what to avoid, a considerable degree of unanimity prevailed amongst breeders. But Mr. BEMENT started a novel question, novel at least to us, who have no pretensions to being versed in the points of *cattle*, as to what were the relative merits of these different points: for instance, we have all been taught that a cow should have a good, clean, delicate head, and a deep, wide brisket; but what proportion does the head bear to the brisket? These were the questions which we expected would have been discussed by this assemblage, and upon which we thought the views of practical men could throw a great deal of valuable light. We observe that upon this subject Mr. Bement read a paper, which we hope some day to get hold of, and which we doubt not is clearly marked with the strong practical wisdom of the author. But at this point we suspect the meeting got into a snarl upon the old and mooted question of the relative values of the different breeds. At any rate, they have quite confounded us by the adoption of a resolution, appointing committees to report "scales of points which should constitute good animals of the various breeds." Now we were so ignorant, perhaps, as to imagine that one scale would have done for all the breeds. We can understand how one breed may be more remarkable for the possession of some points than another, and we can moreover understand that there may be one scale of points for milch cows, another for oxen, &c, but, as we said before, the idea of different scales for different *breeds* is beyond our comprehension; although we by no means intend to stigmatise it as ridiculous; for there was not probably a single gentleman in the meeting, who does not know ten times as much about the matter as we do; and we only allude to the subject in the hope that from some one of our friends (Mr. ALLEN, of the Agriculturist, perhaps,) we may obtain that enlightenment that we have been unable to procure from our books. Several of the committees, we perceive, deferred their report to a future day, and those views that were expressed do not seem to have been published.

PRESERVATION OF VINES FROM WORMS AND BUGS.

A member of the Legislature and subscriber of the Monthly Visitor requests us to inform our readers that he has found a complete remedy of the cut worm from the destruction of cucumbers, melons, squashes, &c. in a simple box ten inches or one foot square, and six or eight inches high—set open over the hill, without bottom or cover. Such a box, constructed of refuse boards, set with the lower edge just below the surface, will not only stop the cut worm, who crawls about the ground in the night, but will be almost a complete protection from the ravages of bugs. The box also in land well prepared will facilitate the growth of vines, especially in a cold season, by taking greater benefit of the sunshine.

Visitor.

For the Southern Planter.

THE LARD LAMP.

Mr. Editor,—Your paper for the present month contains an account of a lamp which I have never seen, but which I think less desirable than that by which I now write, not meaning, however, to disparage the lamp alluded to in your paper, which I have no doubt is a very valuable one. I will describe to you in as few words as I can, without the aid of a drawing, the lamp I burn. The receptacle for the lard is a tin cup, which will contain about half a pint, placed on a pedestal similar to that of the old tin oil lamps; the top of this cup is flat and soldered to the cup; in the middle of the top is an orifice in which is fixed a casing for the wick, about one inch long, one-eighth of an inch wide, and half an inch high; running from the top of this casing to the bottom of the cup, is a metal plate, on which the wick is to be drawn, as in an astral lamp, which plate is to communicate heat from the lighted wick to the lard in the lamp; attached to the bottom of this plate, embracing the narrow sides of it and running closely parallel with them to the top, and extending over the sides of the casing for the wick, are two pieces of tin, which answer the double purpose of elevating the plate to put on a fresh wick, and of retaining the wick in its proper place at any point to which it may be raised; on one side of the top is an opening covered by a sliding door, through which the lard, which must be first melted for the purpose, is to be poured into the lamp. The lamp which I use is bronzed and is decidedly handsome. One of its great re-

commendations is its remarkable cleanliness, it requiring no attention, save care in filling it, to keep it perfectly clean. It is impossible to spill any grease from the lamp I use, if the sliding door is closed. It was patented by Cornelius & Co, Philadelphia, during the present year. You will see from this account that it is at least more simple than the Ohio lamp which you describe.

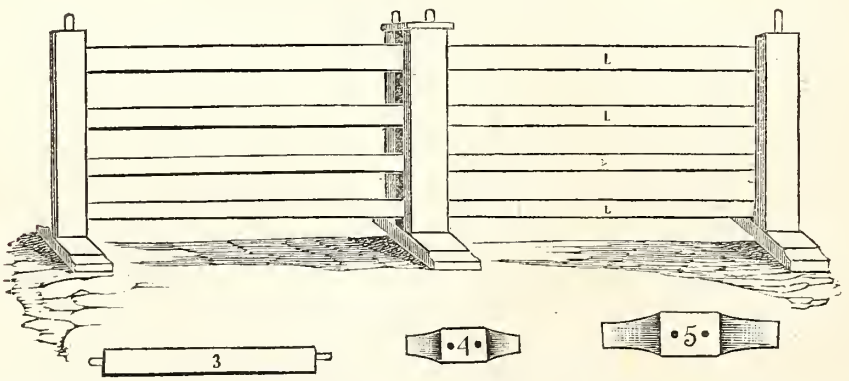
I cannot too highly recommend the use of "lard lamps" to your readers and to my fellow-citizens at large; for in my humble opinion no light can be obtained which combines so many recommendations as this. Its perfect cleanliness, the purity, softness, and at the same time, brilliancy of its light, its entire exemption from smoke and smell, and its great cheapness render it a most valuable addition to our domestic economy. To any family who will use this lamp entirely, the saving in the single item of light must be very great.

Your obedient servant, X.

Hanover, November, 1843.

We know the lamp described by our correspondent, but we think if he had tried both, he would agree with us in the opinion that the Ohio lamp, as he terms it, is far superior. Be this as it may, we entirely agree in the estimate he places on *lard lamps*, when properly constructed.

MOVEABLE FENCE.



The following letter addressed to the Editor of the "American Agriculturist," contains a description of the very best plan of a *moveable fence*, that has ever been brought to our notice:

New York, Nov. 6, 1843.

When I visited the beautiful farm of J. F. Sheafe, Esq, at High Cliff, Dutchess county, the past summer, among other things which struck my attention there, was a moveable fence; and, as it is both handsomer and cheaper than the usual method of making these, as in England, of hurdles, I have thought a description of it might not be without interest to those desiring to put up something of this kind.

1, 1, 1, are posts made of joist, 3 inches by 4, and 4 feet long, with 2-inch pivots in each end, to fit into the holes of the cap 4, and step 5; 2, 2, 2, 2, are slats 12 feet long, 4 inches wide, and 1 inch thick, nailed to the posts 1, 1, 1, making each four slats with their posts, an independent length of fence; 3, is a post the same as 1, 1, 1; 4, is a cap of white oak plank, 12 inches long, 7 inches wide, and 2 inches thick, with two 2-inch auger-holes bored through it at proper distances, into which to insert the top pivots of two of the posts when set upright, to form the fence; 5, is a step, a piece of plank the same as the cap 4, but 3 feet long. It has two holes for the lower pivots of the posts to fit in, corresponding with those in the caps.

Two boys can take down or put up 40 rods of such a fence in an hour; and it is so light, that it can be transported to any part of the farm with great ease. When neatly made and painted it has a handsome appearance, and proves an effectual guard for all orderly stock. By taking it down in the winter, and putting it under cover, it will last a long time. It may be made very cheap by using slabs for the caps and steps, and split poles for the slats.

Mr. Sheafe showed me another kind of moveable fence with pickets, which I may describe hereafter; but I rather prefer this as being more simple. S. Allen.

CHARCOAL.

We have been requested by a correspondent to obtain for himself and neighbors, who desire to make some experiments with it, exact and practical directions for using *Charcoal.* We know not how better to comply with this request, than by publishing the following extract from an address delivered by Dr. Lee, before the Agricultural Society of Erie County, N. York:

"I have stated to you that most plants require, in addition to water and carbon, a portion of nitrogen. This also comes from a gaseous substance in the atmosphere. Although nitrogen forms the largest element in the air, (79 per cent.) yet it has been pretty well settled that plants do not obtain their nitrogen by decomposing common air, but derive it from ammonia, which is furnished to the atmosphere in great abundance by a world of decomposing vegetables, and animals. It is the ammonia that escapes from putrefying substances that causes their offensive smell. Now, again, comes up the practical question: How are we to collect this highly volatile gas, and transform it at the cheapest rate, into wheat, beans, cheese, and wool, of which it is an important element?—Rain water has a strong affinity for ammonia—which is a compound of 14 parts of nitrogen and 3 of hydrogen. Water at 50° will absorb 650 times its bulk of this vegetable food. Every rain, then, brings considerable quantities of it to the ground. It is the ammonia in rain water that imparts to it its peculiar softness in washing the hands or clothes. It is the ammonia in snow that makes it valuable as a manure; and it is the ammonia in rain water that causes it to putrefy in some degree, like an animal substance, when water is permitted to stand in warm weather in a close vessel above ground. The first fall of rain after a long drought is much the richest in this gas. Being extremely volatile, it escapes into the air again after a warm shower much quicker than water evaporates. What then will aid the cultivator of plants, and seize this volatile ammonia, as lime does carbonic acid, and hold it permanently about their roots, in such a shape that it will feed them all they need, and no more? For an excess of this stimulating alkali, like an excess of salt in our food, will destroy life instead of supporting it.

"*Common charcoal* is the cheapest, and, therefore, the best material to apply to cultivated fields for this purpose. It will absorb 90 times its bulk of ammonia, and will give it out slowly to the vital attraction of the roots of plants.—Most of you know that charcoal will correct the taint in meat—will purify rain water in a suitable cistern, so as to render it the purest water for culinary purposes. Such charcoal should be often renewed in filtering cisterns, and when saturated with ammonia, is an extremely valuable manure. The liberal application of this well known substance to the wheat fields in France, has mainly, in connection with the use of lime, added within the last ten years 100,000,000 bushels to the annual crop of wheat grown in that kingdom. The charcoal should be sown in May, at the rate of 75 bushels per acre, well pulverized. This subject is one of vast practical importance. By studying the science of agriculture, you may grow fifty bushels of good wheat on any acre of your land, I have good reason to believe, every year, bating of course extreme casualties.

"You all know that a single kernel of wheat, will, sometimes, when its fecundity is highly stimulated, send up 20 stalks, and that each stalk will bear a head containing 100 kernels. Here is a yield of 2,000 fold. Nature then has rendered it practicable to harvest 2,000 bushels of good wheat from one bushel of seed. The most sceptical among you will not deny that 2,000 kernels have been produced from one kernel, and that the same natural causes that produce such a result in one instance, will ever operate, at all times, under like circumstances, in the same manner. Hence, it is but reasonable to say, that nature is quite as willing to produce 50 bushels of good wheat on an acre of ground every year, mark me, *if her laws be obeyed*, as she is to grow fifty bushels of weeds every year on the same ground."

TO PREVENT MOULDING IN BOOKS, INK, PASTE AND LEATHER.

Collectors of books will not be sorry to learn that a few drops of oil of lavender will ensure their libraries from this pest. A single drop of the same oil will prevent a pint of ink from mouldiness for any length of time. Paste may be kept from mould entirely by this addition; and leather is also effectually secured from injury by the same agency.

LIEBIG.

We observe that various attacks have been made by the scientific men of Europe upon Professor Liebig's lately celebrated work on "Vegetable Physiology." Amongst these, the most virulent and the most elaborate, seems to be a review from the pen of a countryman and brother professor, Dr. *Hugo Mohl.* He seems to think that whatever is good in Liebig, is old, and whatever is original, is bad. It is hardly worth our while to enter upon an elaborate and scientific theory, which is liable to be upset by the time we have mastered it, and as we have neither

time nor capacity to investigate all the new doctrines that are broached, we will, in general, content ourself and our readers with the practical results derived from actual experiment.

HOW TO MAKE AN UNPRODUCTIVE FRUIT TREE BEAR.

A lady of our acquaintance took us into her garden a few days ago, where we were shown an apple tree which, she informed us, had been planted for ten or more years, but had never before borne any fruit. In looking over an old volume, she accidentally met with what purported to be a remedy for this unproductiveness, which was simply to cut from each limb, close to where it diverges from the trunk, a piece of bark about four inches round the limb, and one inch in width, and immediately replace it by tying it on with a rag until it adhered again. Early in the spring she tried the experiment upon the tree we speak of, leaving, however, two or three of the limbs untouched. The result is, that it is now filled with apples, which bid fair to ripen finely; but it is worthy of remark, that only on those limbs which had been cut is the fruit to be seen. The operation is very simple; and, as it has proved successful in this instance, we have no hesitation in recommending its trial in similar cases.—*Reading Gazette.*

For the Southern Planter.

ON RIPE BREAD.

Mr. Printer,—I wonder you do not oftener tell the farmers and planters how much they would gain, by using light bread *two or three days old*, instead of fresh from the oven.

Doctor Mason, who studied in France and Edinbro, and has been a good deal with the Yankees, told my husband, (John Dumpling) six years ago, that in England and the North, they never use bread till two days at least, after it is baked: and he says, *that* is the reason why their women (if they don't lace tight, or dissipate too much,) have blooming cheeks for so many years longer than we have. John and I agreed to try it: and upon my word and honor, the Doctor told the truth. We both are cured of ailings we used to have, something like dyspepsy: and the little Dumplings have rosier faces and healthier stomachs than any children in the neighborhood. I have no doubt, as Dr. M. says, that more than half the sallow, weather-beaten looks of our Virginia ladies, who generally seem ten years older than they are, is owing to the unwholesome, hot bread they eat three times a day.

When bread comes out of the oven, it is full of a bad sort of air—*carbon*, I think they call it, or *carbonic assid gass*. Put it in a clean cupboard or press, in a clean room, and it parts with that *gass*, and takes in a wholesomer sort, which they call *oxygen*, which they tell me is the purest and nourishingest part of the air that we breathe. When the impure gass has been so changed to the pure sort, the bread is *ripe*, and fit to eat.—On a fair trial, any body will find *ripe* bread sweeter and better tasted than unripe.

It can't be eaten quite so fast; and less of it will satisfy the appetite: which is another reason why it is healthier—in addition to its being more digestible.

Still another reason in favor of ripe bread is, that you can always have it well risen; because you may wait for it to rise, half a day if necessary—which you cannot do, when the loaf is to be baked in a hurry for breakfast.

Ripe bread is known to go so much further than fresh, that (Doctor Mason says) in a great famine once, in London, the bakers were ordered not to sell any bread under three days old.

If you like me as a correspondent, I may write to you again. And John says, perhaps *he* may. And he's a great scribe.

Your friend,

DOROTHY DUMPLING.

Louisa, November, 1843.

P. S.—John wants to have a farming club in Louisa, like some they have in Orange and Albemarle. I'm for it. D. D.

We hail with pleasure the re-appearance of Mrs. Dumpling in our columns. She is an old acquaintance of our early youth, and to this day ideas of hospitality and kindness are associated with her jolly good humored face. It has been a long time since we heard from her, and knowing that she lived in a land where people never die, except of old age, we feared that she had emigrated and taken friend Johnny to the West. Write, Mrs. Dumpling, write by all means, and make the old man write too: if you were a thousand times less interesting and instructive than you used to be, such is the paucity of our female correspondents, that we could not choose but hail you with especial pleasure.

For the Southern Planter.

BLIND DITCHES.

Mr. Editor,—I recommend to your Powhatan correspondent the following plan for filling his blind ditches. Begin by placing three poles at the head of the ditch with the butt-ends up stream, then proceed placing all the other poles with their butt-ends down stream, and do not cut off the limbs, as they serve to cover the poles first put in; proceed in the same way to

the lower end of the ditch, always observing never to put the butt-ends of the poles together, which if done, would obstruct the passage of the water—but by placing them two or three feet from each other, they will admit a free passage of the water from the sides as well as that which flows from the head of the ditch. Begin to fill in the ditch at the lower end; press the limbs down, and if some of them are too stiff to yield, a chop with an axe will make them lie well.

A word to your correspondent M. He should purchase a treatise written by Edward Bevan on the management of bees. It is a valuable work on this subject, and he will find it interesting and useful, at the cost of only thirty-one and a quarter cents.

AN OCTOGENARIAN.

IMPORTANT INVENTION FOR CONTROLLING UNRULY HORSES.

Mr. MILLER, an ingenious saddler, of Lothian street, Edinburgh, has devised a mode capable of preventing even the strongest and wildest horse from escaping the control of its rider or driver. On Wednesday last, Mr. Miller made a public trial of his invention in Queen street, in the presence of Professor Dick, Mr. Wordsworth, and a number of individuals, including several of the country gentlemen, and all of approved knowledge. For this purpose, a strong, active, hard-pulling, and notorious run-away horse, was procured, and yoked in a gig, when Mr. Miller boldly took his seat, and requested some of the company to irritate the animal, with which desire they reluctantly complied. Off set the horse, but he had scarcely made a few springs, when Mr. Miller at once subdued him, bringing him to a literal stand. This was repeated several times, every means being employed to provoke still further, the restive animal; but he was as often brought up by Mr. Miller, and apparently with a ready facility. All present expressed themselves delighted and surprised, not more by the efficiency than the neatness and simplicity of the invention. The apparatus can, we understand, be obtained at a trifling cost, and can, besides, be used with any harness or riding-bridle, without alteration.

British American Cultivator.

For the Southern Planter.

CHARCOAL.

Mr. Editor,—The recent investigations of the French chemists, together with the learned researches of Liebig, have given such importance to charcoal as a preventive of rust in wheat, that many of my neighbors, as well as myself, are very much inclined to test its efficacy by experiment. The sole obstacle in the way is our ignorance of the proper quantity to be applied, and I write this letter to you, in the hope that your superior opportunities of acquiring knowledge, will enable you to impart the necessary information.

I confess for myself that I have no confidence in its proving, as its zealous advocates claim for it, an *effectual* preventive of this most serious of all the maladies of our great staple, but I think it not improbable, from its great attraction for *nitrogen* or *ammonia* and the reluctance with which it parts with this principal aliment of vegetation, that it will act as a *retarding principle*, and thus diminish the liability to the disease — If its value should only reach this far, it will be difficult to estimate its importance to the wheat grower. If you will act as my guide in this matter I will give the charcoal a fair trial on a liberal scale, and report the result of the experiment to the public.

Whilst I have my pen in hand I will add a few remarks on the article in your November number from an English wheat farmer in favor of thin sowing. Have you ever seen the views of Lorrain, one of Pennsylvania's most intelligent, practical farmers, in opposition to the system advocated by Messrs. Davis & Johnstone? They have been published for many years, and should be in the library of every farmer in the wheat region. Imbued by nature with an intellect strongly resembling that of Dr. Franklin, he brings everything to the tests of common sense and sound philosophy, and I think if you will refer to his essay in favor of thick seeding, you will be struck with his great superiority over the Englishmen in all the qualities which should recommend his opinions to weight with farmers. Without at present, in this hurried letter, confining myself literally to his book, I will endeavor to recall some of the reasons upon which he bases his opinions. 1. When you sow thin, say three pecks to the acre, as suggested by the Englishman, you have it thinned still more by the fly, and then by the winter's frosts, and not unfrequently by other accidental causes, some one of which is continually committing havoc upon it from the period of seeding till the genial weather of the spring enables it to escape from its destroyers. Then if the land is rich, it tillers in proportion to the spaces between the plants, and forms huge tussocks, in which the roots are so closely matted together, that it is impossible they can gather nutriment so readily from the soil, as the same number of *original* roots which are distributed equally through it. Again, he argues from the plainest principles of vegetable physiology that the same number of ears, supported and nourished by a greater number of original roots, must be capable of producing much more and better grain than it is possible for them to produce when

nourished by a much less number of roots of the same description. Of course it would be a legitimate corollary to assert that as thicker sowing produces more *original* roots than thinner sowing, it must be more productive, even when only the same number of stems and ears are produced by both modes of seeding. Thick sowing he thinks acts like suckering, as it reduces the number of stems from each plant.—This he farther illustrates by reference to various fruit-bearing tillering plants. Those who sucker maize know very well that three or four stalks grown in one cluster from three or four grains, will yield far more and better grain than the same number of stalks grown in the same way from one grain. The stems produced by tillering, form roots, but like all other roots formed by suckers, they are not, neither will they become so perfect, while they attach to the parent plant; like young animals, they more or less depend on it for support, and like them, prove powerful exhausters, until they are separated from it. This is clearly seen in orchards, &c. &c. These and other striking views he sustains by the experience of a lifetime and by the uniform practice of all those portions of Europe, distinguished for their intelligence and agricultural skill.

Under the influence of these views of Mr. Lorraine, I have sown this year upwards of four hundred bushels of wheat on about two hundred and twenty-five acres. A portion of the land is clover ley, part tobacco ground, and the residue corn land—nearly all of it very rich. The seedsman varied the quantity according to circumstances, falling below one and a half bushels on parts of the corn land, and rising as high on the richer portions of clover ley and tobacco land as two and a half, and perhaps occasionally three bushels per acre. Some of my neighbors who are the advocates of thin sowing, have seeded at the rate of one bushel to the acre on precisely similar land and about the same time. This will afford a tolerably fair test of the respective merits of the two modes, the result of which I will give you next summer.

Yours, respectfully,

W. M. Peyton.

Big Lick, Roanoke, Nov. 29, 1843.

Mr. Peyton seems rather sceptical upon the subject of charcoal proving a preventive of rust, and assuredly the very contradictory results of reported experiments authorise us to doubt the fact. But we would suggest to our friend, that paradoxical as it may seem, it is perhaps not less to its tendency to *advance* than its property of *retarding* vegetation, that its efficacy as a preventive of rust may be attributed. The great value of charcoal as a fertilizer is supposed to consist in its well known power of condensing the fertilizing gases within its pores, which it gradually yields to the requirements of the roots of growing plants. Various opinions exist as to the cause of rust, but we believe Mr. Peyton's notion, and the one most commonly received, is, that it arises from an excess of stimulus furnished the plant, about the time of its maturity, by the peculiar weather which frequently attends that period of its growth. If the stimulating gases thus generated are condensed in the pores of the charcoal, the injury which they would otherwise inflict may be prevented, and this we imagine is the operation to which Mr. Peyton alludes as the "retarding principle." But if the charcoal acts as a retainer of the gases which are generated at other stages of vegetation, and thus stores up for future use food that would otherwise be dissipated and lost, it may in this way *hasten* the maturity of the wheat so far, as to take it out of danger from that peculiar spell of weather, which is supposed to produce the rust, and which generally occurs about the critical period at which the seed matures, under ordinary circumstances.

For particular directions for the use of charcoal, we refer Mr. Peyton to an article in another part of this number.

We shall be very much obliged to Mr. Peyton for the result of his experiments next summer, and hope they will go far to settle this vexed question of thick and thin seeding. Whatever may be the proper quantity of seed for the English farmer, we are very sure more will be required for the American cultivator, as a very large allowance must be made for the greater destruction of seed in this country, arising from the fly, and our more imperfect and slovenly mode of cultivation. We do not think Mr. Lorraine's arguments *conclusive* against the Englishman, and should be glad to see the subject farther discussed by our correspondents; presuming always that we, and we believe our readers too, consider statements of facts far more conclusive and satisfactory, than any *a priori* reasoning, no matter how ingenious or plausible it may appear.

From the Farmers' Journal.

CABBAGE HEADS FROM STUMPS.

Friend Cole,—I do not know all that your Boston gardeners are up to, but I do know, that if cabbage stumps of any variety are set out in the spring in good order, that one, two, three, or

even four good sound heads will grow on them—and this they will do year after year, until they die by accident.

They are managed in the following manner: When the upper, *narrow leaved* ones, which would bear seed, are carefully rubbed off, and likewise all the lower, *round leaved* ones, which will form heads except the number the strength of the stump and soil are capable of bringing to perfection.

At our cattle show, last week, Mr. John Drew presented several such stumps, with one to four heads of low Dutch cabbage on each, which have borne for three years. He sets them out in earth in the cellar in autumn, cuts off the heads when required for use, and places them pretty thick in the garden in spring. The labor is trifling, the cut worm gives no trouble, and the crop sure and abundant.

JAMES BATES.

Norridgewock, Me., Oct. 18, 1843.

For the Southern Planter.

HERDSGRASS.

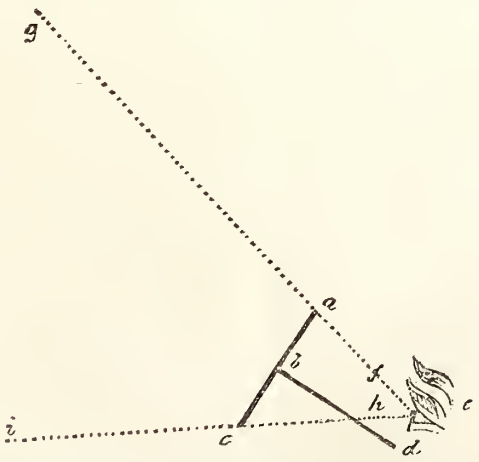
Mr. Editor,—Having it in view to commence the seeding of herdsgrass, I was much gratified at seeing a short communication on the subject in your October number, from your Nottoway correspondent, P. B. W., with which I was much pleased as far as it went, but as I am a beginner with that kind of grass, and as there is none raised in my neighborhood, may I be permitted through you to ask him and all others who may see my request and have experience on the subject, to throw a little more light? Now I design my first effort to be on thin land which grew corn the present year, (not with the view of raising hay) and wish to be informed in what proportions the oats and herdsgrass seed should be mixed, and whether the grass seed will bear being got in with small turning ploughs, that being the mode in which I propose to get in the oats? whether herdsgrass will take on wheat land, seeded in winter or spring? and what preparation is necessary, time of seeding, quantity of seed, &c. for a hay meadow?

The information asked for above, together with any further information which may be necessary on such a subject, will be acceptable to me, and perhaps may be so to others of your readers.

A SUBSCRIBER.

Powhatan, Nov. 25, 1843.

THE MEASURING CROSS.



We are indebted to a correspondent of the "Albany Cultivator" for the following description of a simple device for measuring heights. It is probably novel to many of our readers, and may be at some time or other useful to all:

"*Messrs. Editors,*—When I was a little boy, I heard a very learned and scientific gentleman, a native of Germany, describe to my father, an easy method of ascertaining the exact height of a tree, monument, or any other perpendicular object, by means of what I have called, at the head of this article, the *Measuring Cross.* As a knowledge of this may add to the farmer's stock of useful information, I communicate it for his special benefit.

"In this diagram, *a*, *c*, and *b*, *d*, represent the

cross to be used; *a*, *c*, and *b*, *d*, being of equal length, each precisely *twelve inches*. *b*, *d*, must be inserted in the centre of *a*, *c*, at *b*. Then go towards the object you design measuring, placing the end of the cross *d*, on your chin, or upper lip, or any other part of the face on a level with the eye, until the *top* of the object at *g*, and the *end* of the transverse piece of the cross at *a*, form the right line *g*, *a*, *f*, with the eye at *e*; and the *bottom* or *foot* of the object at *i*, and the lower end of the transverse piece at *c*, form the right line *i*, *c*, *h*, with the eye as before.—Then *from the spot where you stand, to the base of the object, is its exact height.*

"In this way, any person, though ignorant of the principles of trigonometry, may measure correctly a tree, for example, the height of which he is desirous of knowing before he falls it, so that he may be assured it will afford him a piece of timber of the requisite length for some particular purpose."

From the American Agriculturist.

LOTION FOR A BRUISE OR SPRAIN.

In a letter from Mrs. Susette Andrieu, a woman who, by instinct, experience, and talent, is, as I am persuaded, the best nurse in these United States, I find the following recipe for sprains and bruises. My system has always been to spread such things far and wide, for the benefit of humanity and the brute creation. In every family there should be a common-place book, in which such things should be entered or pasted, for although we often hear of cures for burns, scalds, sprains, colics, &c., when these occur, we have either forgotten the materials or the proportions, or we have them not at hand. How many farmers are there who have such a thing as a set of phlemes to bleed a horse, or a bottle with the neck of it wrapped with twine, ready to administer a drench? But to the prescription for a bruise or sprain: 1 pint soft soap, 1 pint strong vinegar, 1 handful of table-salt, a table spoonful of saltpetre. I. S. S.

For the Southern Planter.

POUDRETTE.

Mr. Editor,—Having procured through a friend in Richmond five barrels of poudrette from you, I have delayed making any report regarding the result of my experiment until I had gathered all my corn, it being my single object to arrive at the true state of the case. I had bought it time enough to have planted it with my corn, but it did not reach me until my corn was all up, with the exception of a small piece of new ground. I planted one-half of this with corn, and immediately before covering the corn, put a gill and a half of poudrette on it, and then with the hoe covered it slightly with earth: the other half of the lot I planted without manure of any sort. As this lot was near my house I took a good many of my friends at different stages of the corn to see if they could tell any difference between that which had, and that which had not, the poudrette. They never could discern any. I often asked the hands if they could see any difference at the time they were working the corn; they said they could see none. I used it also on peas, cabbage plants, and beets, but without seeing any benefit. I put three barrels, at the rate of a gill and a half to the hill, on corn that was up in different parts of the field, on poor land, and on rich land, but could see no difference. I had taken up the most exalted opinion of it from what I had seen in the Cultivator, and from my friend Mr. Woodfin's reports of its action upon his land, and although I have been disappointed in it, I am confident if under the superintendence of Mr. Woodfin, poudrette were manufactured in your vicinity, it would meet with a ready sale. I may further state to you that scarcely one gill of the five barrels was used without my observation; that I found in every barrel shavings, window glass, earthenware, &c. I do not, in the least, attach to you any blame in this matter; on the contrary, I think the farmers of Virginia are under lasting obligations to you for what has been done through your very useful paper in awakening a spirit of improvement throughout our State. You, therefore, have done nothing in reference to the above but what was highly commendable, in bringing before the farmers of this State an article that if manufactured upon Mr. Woodfin's plan, would be highly beneficial to farmers living remote from large cities.

A query to the admirers of Liebig. Liebig ascribes the value of gypsum to its giving a fixed condition to the ammonia which is brought into the soil for the nutrition of plants. Now, is not ammonia in lesser or greater proportions everywhere; why then does not gypsum act everywhere?

JAMES FIFE.

Charlottesville, Dec. 1, 1843.

We could fill a number by publishing all the testimonials we have received of the utter worthlessness of the article we sold last spring as poudrette. Mr. Minor himself must by this time be convinced that he was grossly imposed on in the article he sent us.

GREEN CORN-STALKS MAKE RICH MILK.

At a late meeting of the Farmers' Club in New York, Mr. Morris, of Morrisania, stated that he kept a dairy of a hundred and twenty-

six cows to supply the York market with milk. That he feeds them on green corn—he sows his own broadcast—and says it makes better and richer milk than any other feed he has used, and there can be no doubt that it produces more provender, by the use, than any other vegetable.—Mr. Morris's plan coincides exactly with our notion. So much saccharine matter as corn-stalks yield, must make rich milk.—*Farmers' Gazette, New Haven.*

From the South-Western Farmer.

———, *August* 7, 1842.

TO THE LADIES.

Will you allow a gentleman with an indefinite age, an admirer of domestic economy, to tell you how to remove grease spots from your merinoes, silks, &c. without injuring their color? Or the cuff and collar of your husbands' coats can also be cleaned in the same manner; in short, any article that may be desired, but it is more particularly applicable to such as are made up of wool or of which it forms a part.

Take the yolk of an egg, entirely free from the white, mix it with a little warm water, (be sure not to scall the egg) and with a soft brush apply the mixture and rub it on the spot until the grease appears removed or loose.—Wash off the egg with moderately warm water, and finally rinse off the whole with clean cold water. Should not all the grease be removed, which may arise from being on a long time, or not sufficiently washed, dry and repeat the operation.

Some years ago, I was in company with a lady who wore a splendid merino shawl, and in passing the wheel of a carriage, she got her shawl badly smeared with tar and grease. I saw she was much mortified at the accident, and I immediately applied the above remedy, and in a few minutes all was sunshine again. I don't pretend to say the lady lost her temper. Oh no, not I.

Try it and let us know the result.

J. E. W.

P. S.—If there is a nap on the article, brush with it.

J. E. W. is a gentleman of veracity. We vouch for him.—*Eds. Farmer.*

IMPROVEMENT IN SELECTING SEED WHEAT.

In the selection of seed-wheat, take at least six bushels of a good quality, then take a seive or screen with holes sufficiently large, so that 5 bushels of the 6 will pass through it. The one bushel that remains will be kernels of the largest size, and this should be used for seed. When this seed is sown and germinates, it will be found that the blades which spring from it will be uniform, and present the same healthy appearance, and will maintain the same equality until the time of harvesting. Thus instead of having so great a proportion of small weakly stocks start from diseased or pinched kernels, which can never produce any thing but small straw and consequently wheat of an inferior quality, the whole will stand a fair chance to come to maturity, divested of many evils which attend the sowing of grain where sifting is neglected.

But, says the reader, this important discovery of which you speak, don't amount to any thing after all. It has been known for years, that to sift out the small grains from seed-wheat is a good idea, and it is now generally practised among our best farmers. I will respectfully ask such, have you ever known sifting carried to the extent I propose? If you have not, you know but little of the real benefits that will result from this discovery and practice in accordance with its reasonable theory.

I am informed that Isaac Bowels, Esq. of this town, tried the experiment the past season, and the result was what we had good reason to expect, the most perfect growth of wheat he has ever raised. I believe if this practice should be adopted generally by the farmers of this State, the quality and quantity of the wheat crop would in a very few years be increased one-quarter by the simple process of sifting seed in the proportion I have named, and no farmer need be afraid of injuring his seed by carrying the principle to too great an extreme. The improvement is within the reach of every farmer, and he can satisfy himself on this point.—*Maine Farmer.*

"SELECTED."

Why does the Southern Planter of Richmond, Virginia, place the word "selected" at the bottom of articles selected from our journal? The credit is due us, and we should have it. We refer the Editor to his November number, and he will see that in two instances, he has withheld that justice which, in common courtesy, he ought to have awarded us.—*S. W. Farmer.*

In our editorial career we have always endeavored to be scrupulously exact in rendering "unto Cæsar the things that are Cæsar's"—and to be thought wanting in courtesy towards a cotemporary for whom we entertain so high a respect as the South-Western Farmer, is peculiarly painful to us. We have never hesitated to appropriate to our own columns a good article when found in our exchange papers, and this transfer we have ever esteemed the highest compliment we could pay to the paper. But to appropriate it, and *wilfully* to withhold the credit,

would be little better than highway robbery. But there are various reasons why we may copy an article and be unable to credit it to the proper source. In the first place, suppose we wish to transfer the article on "Small Farms," credited to "Ex. paper," as it appears in the number of the South-Western Farmer under date of October 27, 1843, how shall we make it? If we are ignorant of the Editor with whom it originated, is not "*selected*" the proper term to apply to it? It is true that the articles copied into our November number are not thus marked in the Farmer, and we do not now recollect whence we obtained them, but think it very likely that we copied them from some other paper where they were marked as extracts or selections; or it may be, that from the manner in which they appeared in the South-Western Farmer, we did not know them to be originals. Our own custom is to lead our editorials; consequently every thing in the Planter that is not leaded, or from a correspondent, is copied. This habit of designating editorials by the use of particular type we had supposed obtained universally amongst the craft, but since our attention has been called to it, we observe that the editorials of the S. W. Farmer are printed in a great variety of type, and perhaps it is intended that every thing that is not credited shall be understood as original.

We hope we have been successful in our endeavor to satisfy our brother editors of the Farmer that we may have copied an article from their paper and marked it as selected, without having been guilty of the dishonest design of robbing them of any of the merit to which they are so justly entitled.

From the Albany Cultivator.

CRUSHING CORN—CORNSTALKS.

Messrs. Gaylord & Tucker,—I do not intend passing another winter without a corn and cob crusher. During the winter of 1840–41, I hauled my corn to a bark mill, run it through, and then hauled it ten miles to a grist mill, and got it ground coarse, and never but in one instance did I get my grist without going twice for it. This you will say was paying dear for the whistle, and so it was; but I thought it paying dearer still, to see my working cattle voiding unmasticated, full one-half the corn they ate.

In 1841–2, I hauled my corn to a steam mill in town, and paid one-sixth for toll, besides paying five dollars to get the thing started; and I foddered twenty-six head of cattle and young horses on cornstalks cut up at the roots before frost, on to which, after being run through a patent cutting box and well wet, was put from two to four quarts per day to each head, of corn and cob meal. My cows gave milk all winter, and nearly up to calving; and all my neat stock, with one or two exceptions, would, if any accident had happened to them, have been ready for the butcher.

I saved four hundred dollars in wintering my stock, admitting hay to be worth fourteen dollars per ton, which was the case here that winter. I have a portable horse power, which I think will turn the crusher, and stormy days in winter, my help can be employed in grinding, instead of keeping under the feet of the women, who must necessarily be employed about the house.

Yours, truly, J. W. Smith.

Maumee City, Ohio, 1843.

For the Southern Planter.

Barren Hill, Nottoway, Dec. 7, 1843.

Mr. Editor,—Enclosed I send you my subscription to the Planter for 1844. I had intended along with it to have sent you the accurate results, ascertained by weight or measure, of some experiments made by me this year to test the relative value of several substances used as manure; but having been prevented from attending personally to the gathering of the crop upon which they were applied, I can only give the apparent results.

On the 29th of January last I scattered green sand in ten rows, eight feet wide and twenty yards apart, over a wheat lot, the wheat being an inch or so high. On the 4th of March I sowed this lot in clover. I could perceive no other effect on the wheat except a slight difference in color, that on the marled rows being rather greener than the rest; but the clover came up thicker throughout these rows, and the weeds which succeeded stood several inches higher than the average of the lot.

About the same time (viz: 4th of March) I scattered several rows of this earth over oats just seeded upon land very poor, dry and sandy, sowing at the same time clover seed over these rows; and also on rows alongside upon which no green sand was put. I could perceive no effect upon the oats. The clover came up much thicker upon the green sand, and has flourished surprisingly for such land, while that on the rows alongside has nearly perished out.

On the 24th, 25th and 26th April, after corn was covered in planting, I put dry, unleached ashes on three rows of corn, about a handful to a hill. Then wet, leached ashes to the three next rows; then green sand to the three next; then

nothing on the three next; then coal ashes and dirt (obtained from a spot upon which a kiln of charcoal was burned several years before,) on the three next rows, and so on, alternately, over about an acre. The corn over this space was extraordinary, far superior to the rest of the field; but owing to the hands, on gathering the corn, throwing two rows together, instead of three, as I directed, the corn treated with these several manures, was so mingled, that I lost the chance of testing their relative value.

Do you ever, Mr. Editor, now-a-days, see any thing in the Cultivator or elsewhere, about green sand, Jersey marl, or "gypseous earth," as Mr. Ruffin terms it? Since I dropped the Cultivator for the Planter, I have scarcely seen any account of this article, upon which such hopes of improvement in New Jersey were founded several years ago, although Virginia has as much to hope from this particular substance (if it be indeed valuable) as any other State. Professor Rogers, (from whose description of it, and whose suggestion that it would, probably, be found far higher up the country than the shell marl—I discovered it in 1835—) thought very highly of it. Mr. Ruffin experimented with it, sometimes with very favorable results, though he always seemed to entertain a low estimate of its value, compared to shell marl, though this may have been owing to his having used indifferent deposits, as it is probable that some beds are far superior in quality to others of the same material. I was in Mr. Ruffin's office in Petersburg in 1841, and mentioned to him that I had discoverd another bed of green sand in cleaning out a sulphur spring; that I found the veins of water forming the spring to rise through this bed. He observed that that fact accounted for the quality of the water, and the green sand was the source whence the sulphureous quality was derived. I took a lump of this article from his office home, and found upon comparison with mine that it was of a much paler color, and crumbled almost as easily as sand, while mine had nearly as much cohesion as clay.

By giving some late account of this article in your January number, either original or selected, you will very much oblige

Your friend, SHARPE CARTER.

PRESERVATION FROM DROWNING.

Take a silk handkerchief, and spreading it on the ground, place a hat on the centre, with the crown upward in the ordinary position of wearing; and gather up the corners, giving them a twist to keep them more securely together. The person may then venture into the water, without being in any fear of the drowning person taking hold of him, as the quantity of air contained in the hat is sufficient to support two persons; or it might be advisable to put the corners of the handkerchief into the hand of the person drowning, who would be thus kept floating and easily conveyed to the shore.

For the Southern Planter.

THRESHING MACHINE.

Mr. Editor,—I wish to know if there is such a thing in use as a small wheat thresher, to go with one or two horses, that will thresh from 100 to 150 bushels per day, to occupy but a small space, and to cost from twenty to forty dollars. If our machinists have not yet constructed such a machine, they should do so as soon as possible; for such an one is more needed in North Carolina by the small farmers than any thing else.

AN INQUIRER.

Plymouth, N. C., Dec. 4, 1843.

We have had a great many applications for a small, cheap threshing machine, and noticing one at New York this fall that struck our fancy, we purchased it, and are in daily expectation of its arrival. Our opinion of its merits were founded altogether upon an examination of the machine as it stood, and from the representations of others who had tried it. After we have tested it a while, we will know more about it, and if it does not belie its promise, we shall make arrangements for a constant supply of them.

This machine is calculated for two horses, and it was said, would get out a hundred bushels a day in the most perfect manner. The horse power will cost about sixty or seventy, and the thresher about thirty dollars. And we think we are waranted in saying that these prices are about as low as a really good substantial article can be offercd at.

SALT A PREVENTIVE OF SMUT.

To the Editor of the Southern Planter:

Sir,—In perusing the pages of your excellent journal, I find salt recommended as a fertilizer; although my experience with this mineral is very limited, still such as it is, I have concluded to give it to you.

A few years since my crop of wheat was so badly injured by the smut, that I determined I would not use it for seed, and I, therefore, purchased from a neighbor a few bushels that was clean and good. I found, however, that I had not near enough to finish my crop, and having heard that salt sowed with wheat would prevent the smut, I resolved to make the experiment. Accordingly, I took my smutty wheat and washed it, and mixed with it while it was

yet wet, about a quart of salt to each half bushel; and with it finished sowing my crop.

When I harvested the crop, I found the wheat purchased of my neighbor much injured by the smut, but my salted wheat was entirely free from this disease, and so superior in quantity and quality, that I believe if I had let alone my neighbor's *clean* wheat, and sowed my whole crop of my own smutty wheat, thus prepared, I should have made one hundred bushels more than I did.

In the spring of 1842 I tried a similar experiment on a few bushels of smooth chaff spring wheat, which was much affected with the smut. I washed and mixed as above, about a quart to the half bushel, and sowed it by the side of the same wheat without this preparation. My salted wheat grew about six inches higher than the other, and yielded me twenty bushels to one seeded; whilst the other did not yield half that quantity.

Respectfully your obedient servant,

A. Lee.

Patrick Co., Va., November, 1843.

The Editor of the "American Farmer," from whose paper we extract the following essay, well remarks, that it is suited to other regions of our country as well as to Maryland:

PRIZE ESSAY

Read before the Prince George's County Agricultural Society, November 2, 1843, *on the Best System of Farming, adopted to the Tobacco Growing Region of Maryland.*

BY WALTER W. W. BOWIE, ESQ.

The best system of farming, adapted to the tobacco region of Maryland will, I am inclined to believe, be found upon trial to be similar to the one hereinafter detailed. I set out upon the principle as if it were admitted, (or I believe that it cannot be denied) *that small farms are most productive.* Although I take as a model, a farm of four hundred acres, it being considered a medium sized farm in this region, yet I believe, as the number of acres are diminished, the rate of product to the amount of capital will be increased.

No farm should be over four hundred acres. If a man owns eight hundred acres, he should divide it into two farms, and if he has not the force to work both, and cannot rent one out, he had better let it be idle. On a farm of this size, sixty acres in wood is enough and ten acres about his house, for garden, pleasure ground, stables and small lot for a thousand purposes, too tedious to mention. Thirty acres should be put down to grass, not in one body, but in five different lots, selected over the whole farm with a view to the nature of the ground and general convenience. These should be well set in grass, and *one* top dressed every year, thus each one would receive a dressing every five years.—Three of these should be mown for hay each year, the other two might be pastured. This would give twelve acres of early and late pasture for the stock when your clover was getting up in the spring, and when it had declined in the autumn. Thus one hundred acres of the farm are disposed of. The balance should be accurately divided into *four* fields, of seventy-five acres each, to be worked thus—No. 1, No. 2, in rye and oats, and set to clover; No. 3, in corn; No. 4, in tobacco and wheat. That is, 75 acres in pasture—35 in oats, and 40 rye—75 in corn—and 40 in tobacco and 35 in wheat.

By this course, it will be perceived that 225 acres are in cultivation each year. And only one field fallowed each year. The routine would be this: Of one field, 35 acres, would be put in wheat, on fallow, and 40 in tobacco. These crops to be followed by corn, and *it* by rye and oats, and clover and timothy mixed, sowed with the grain. To enable you to do this, there must be employed, including the overseer, a force of thirteen good hands—say six men, three women and three girls or boys, over ten years of age. With such a force, every thing can be kept in good order. I would advise the keeping of eight good oxen, being fully enough for two carts, and seven good work horses with an idle hack pony, as sometimes a make-shift. With good management and ordinary seasons, this farm, and this force, would make the following crop:

40,000 lbs. tobacco, at $4,	$1,600
350 bbls. corn for sale, at $2,	700
500 bushels of wheat, at 80 cts.	400
200 bushels of rye, at 50 cents,	100
500 bushels of oats, at 20 cents,	100
Of stock, wool, &c.	200
Hay,	200
Whole amount,	$3,300

But after a series of years, this amount would be greatly increased by the improved condition of the farm. I would use no manure or plaster on the tobacco or wheat crop—but all should go upon the corn land, and used in top-dressing the young clover and one of the grass lots.—There should be applied to the corn ground at least twenty loads to the acre, on all that part on which tobacco grew, which would be eight hundred loads, the wheat stubble and weeds ploughed in green, would be a sufficient manuring for that part of the field, if two bushels of plaster per acre was applied prior to turning in the weeds and stubble. By such an application their decomposition would be increased, and the *ammonia* and other gases, which ought to be generated, could be fixed in the soil, and retained for that greedy king of plants. Each of these lots of grass, being six acres, would require one

hundred loads of manure, this would make nine hundred loads, and one hundred more would be required for the tobacco beds. Independent of this one thousand loads of manure per annum, I would recommend the purchase of one thousand bushels of *ashes* or *lime*, and one hundred bushels of plaster. It will be asked "how is all this to be raised and spread, and the crop managed with the number of hands you have named?" I answer by having a man in addition to the number named, who with a good horse cart, and the *seventh* horse, will, having nothing else to do, secure the amount of manure, and find time to go to town and sell what otherwise would be lost, and bring back the ashes or lime. He could be constantly employed in bringing litter, weeds, grass, leaves, muck, rich earth and mud, and carrying out return loads of first rate manure. Beside, the cattle could all be soiled until, say the 1st of July. He could cut the grass and feed it to them in racks, keeping them in pen No. 1 for a month, keeping it well littered all the time. Then put them in pen No. 2, and while he carted out the contents of pen No. 1, he could bring return loads to keep pen No. 2 well littered. This process of manure-making would be greatly aided by keeping all your hogs in the pens with the cattle. These pens should be about half an acre in size, with fine shade trees or good sheds, to protect the stock from the heat of the sun, and the hard rains of summer. When the stock are about to be removed from one pen to another, take all hands in and make up the manure heap, and if a rainy day comes or the earth is not fit to work, or a leisure hour or so offers, take every body there, with carts and wagons and run it off in a hurry to the land where it is needed. Then spread it, and leave it till you wish to work the land. If you desire to get the *whole* benefit of the manure, spread one bushel of plaster over it as soon as spread. But, before scraping this manure into heaps, if you have bought *lime*, the proper course would have been to spread over the whole pen, lime enough to make the entire surface look white; if you do this, you then have a valuable compost. This man, horse and cart, will be worth three hundred dollars at least to the farm per year. He will be a hand in the crop, at harvest, planting and housing tobacco, and in seeding grain. When the hogs are put up in pens to fatten, they should have clean, dry beds every day. The pens should be often cleaned out, and fresh leaves or straw, or what is very good, corn-stalks with blades, shucks and tops all on. By this means the hogs being kept dry and warm, fatten faster, and thirty hogs thus kept well bedded will yield in six weeks, sixty loads of manure. In every farmer's kitchen-yard should be a sink, for the reception of ashes, sweepings of the house and yard, the contents of house-buckets, soapsuds, weeds and grass from garden and yard, soot from chimneys, cleanings of poultry-houses and coops, and indeed a general depository for all that would otherwise be offensive to the sense, and every way inconvenient. By having it all concentrated in one spot, and sometimes throwing over it a little dry straw or litter, and sometimes half a peck of lime, it is never in any way offensive, and the back yard is kept clean and neat, while there is accumulating a treasure for the farmer. By strict attention to this sink, fifty to seventy-five loads of manure, worth fully as much as ashes, will be saved in one year. By these several means, it will not be questioned but that the one thousand loads could with little trouble be secured.

In the corn field, five acres should be taken off for a "truck patch." These five should be the poorest in the field, they will thereby be made rich. Half an acre of this patch should be put in sugar beet, one-fourth of an acre in ruta baga, one-fourth in white turnip, one acre in cymlings, squash and pumpkins, and the other three acres in potatoes. Pumpkin seed should be stuck over the whole corn field, it is easily done when you go to thin and "sucker" the corn. By this measure, you obtain a fine supply of food for your hogs and cattle. Take care, however, to reserve your turnips for your ewes in lambing season, which cut up fine, and sprinkled over well with meal and some salt added, will greatly benefit your sheep, and pays you ten times for your trouble. You will get $2 50 for a lamb of the same age that would not bring $1 50, raised upon the old plan of "*letting the sheep take care of themselves.*"

As to the amount of stock proper to be kept on a four hundred acre farm, I would observe, that it is best to keep but little stock and keep that *little well.* One hundred sheep might be kept, if of the Southdown breed, if of the larger and more consuming kind—eighty would be enough. Six milch cows would be amply sufficient, unless making butter should, from your vicinity to market, be an object. Eight work steers and ten or eleven young cattle, in all, twenty-five head. Eight horses and about twenty-five or thirty hogs. This would be amply sufficient for the use of the farm.

TOBACCO PRIZE.

We have been informed by several of the most judicious tobacco planters in Louisa that having tried the prize described in the last May number of the Planter, they are fully satisfied it is by far the best ever used. We have been requested to call the public attention to this subject.

Mr. William Thompson, of Louisa county, is the inventor of this prize, and as he is now in

the progress of obtaining a patent for it, we are desired to forewarn all persons from using it without his consent, which may be obtained by the payment of five dollars for an individual right.

A model, with particular directions for construction, has been left at this office.

GREEN SAND.

In compliance with the request of our respected correspondent, Mr. S. CARTER, we proceed to give our readers such information as we can glean from our books upon the subject of *green sand.*

Like other compound substances, its action is various, uncertain, and perhaps, inscrutable.—Its beneficial influenee was formerly attributed to the *potash* which it contains, and more latterly it was imagined that its chief value consisted in the *silicate of potash* it furnished; this is the substance furnished by common glass, on account of which Liebig and others have recommended it as a manure for wheat. But at the present day, much virtue is attributed to the *protoxide of iron*, which is invariably found in this substance.

Be that as it may, although New Jersey and Delaware furnish the largest beds yet discovered of this valuable mineral, yet it undoubtedly abounds in Virginia to a considerable extent; and although there may be occasional differences in the proportions and combination of the materials of the substance, as it is found in different places, we presume, that, in the general, what is true of the New Jersey sand is more or less applicable to this mineral wherever found. It is, therefore, from the "Report of the Geological Survey of New Jersey," by Professor Rogers, that we principally quote:

"For judging of the quality of a marl by observation, says Professor Rogers, 'some familiarity with the multiform aspects which it assumes is indispensable. The leading rule, however, is to bear in mind that the fertilizing efficacy of the compound resides in the minute, round, greenish grains which compose most, or sometimes all of it; and that it seems, moreover, to be dependent upon the proportion in these green grains of those powerful alkaline stimulants to vegetation, potash and lime, but especially potash. The first thing, then, is to approximate to the relative quantity of the green grains in the whole mass, and this may be effected with a greater or less degree of accuracy in several ways. The simplest and readiest method is to employ a small pocket magnifying glass, and to become familiar with the dark green grains, so as to distinguish them at onee from other dark varieties of sand which sometimes oecur associated with them. A little practice will very soon enable one to use the glass expertly, and to arrive at a pretty true estimate of the probable per centage of the green granules. But as these granules cannot sometimes be distinguished from the grains of ordinary white flinty sand, or from other kinds, in consequence of the particles being all alike coated with a thin film of the dark cementing elay, it will be useful to adopt some method of bringing out, under the magnifier, their different characteristics of color and form. Let the mass be washed in a large glass tumber, and repeatedly agitated with the water, until as much of the elay as possible has been detached from the grains.—After pouring off the turbid water by repeated rinsings, and permitting it to settle until clear, we may estimate the comparative quantity of elay in different marls by the relative amount of sediment which subsides. If we wish to be more accurate, we can weigh out a given quantity of the marl, then pursue the above plan, and decant the clear water from the clay, and after thoroughly drying the clay, weigh it to ascertain its amount. Having got away most of the clay, we should spread out the granular matter upon a sheet of paper and dry it, when there will be no further difficulty in distinguishing, by their color and lustre, the foreign impurities from the grains of true marl, and also of estimating the relative abundance of each. When the marl to be examined contains much clay, I would recommend the experiments to be made upon a regularly weighed quantity, weighing both the clayey and the granular portions. A delicate apothecary's balance will eommonly be found accurate enough. Another more expeditious, though less aeeurate method, is merely to dry the marl, spread it extremely thin upon a sheet of white paper, and then hold it near a window, or in the light, to examine it earefully by the magnifier. The flinty sand, though stained with clay, may then be clearly discerned in consequence of its transparency; whereas, when we inspect a solid lump, all the particles upon the surface are nearly alike dark.

"'A useful suggestion is, to place a portion of the marl upon a hot shovel, or on the top of a stove, when all the granules will change from their ordinary green tint to a light red or briek color, while the other materials of the mass sustain little alteration. This will often render obvious to the naked eye the proportion of the green grains.

"'When there is a yellowish or whitish incrustation upon the marl after the moist surface has remained for some time exposed to the wea-

ther, it is indicative of the existence of a portion of either copperas or sulphate of alumina, the hurtful nature of which has already been explained.

"'An astringent inky taste will very often detect the presence of these noxious substances at times when no such efflorescence shows itself. If the quantity be too small to betray them distinctly to the palate, and we are still in doubt as to their presence, other more rigorous tests are within our reach; and as these astringent matters are so unquestionably pernicious in their action, it is of importance to have the means of determining in what proportion they abound in different marls. This can be effected with precision only by a systematic chemical analysis, but their existence can be made to appear by the following simple tests. Put a small portion of the marl in a flask or other thin glass vessel; pour upon it some pure water, and heat it moderately; after causing the water to dissolve in this way as much as possible, remove the heat, and let it settle; then decant the clear fluid into some glass vessel, such as a wine-glass. If there is any copperas present, it will be evident upon adding to the fluid a little lime water, which will produce a milky turbidness that after a little while will become stained of a yellowish brown color. The milkiness is owing to the formation of gypsum, and the brown color to oxide of iron from the copperas. Or, in lieu of this, add a solution of oak bark, and, if copperas be present, we shall have a dark inky color at once produced.

"'A good marl will, upon being squeezed in the hand, fall asunder again, rather than bake into a tough doughy mass; and upon being left in heaps to dry, will assume a light grayish green color, and be extremely crumbly. It seems to be a very general characteristic of the better class of marls, that they throw out a white efflorescence or crust upon those grains which are most exposed to the air; hence the very light color externally which some heaps of marl possess. This crust I have already shown to consist usually of the sulphate of lime (gypsum), sulphate of magnesia, and carbonate of lime. A drop or two of strong vinegar, or any strong acid, will produce an effervescence or frothing, if it be the carbonate of lime; and should nothing of this kind take place, we may set it down to be gypsum. Of course, from the minuteness of the quantity of the white coating, much care and accuracy of observation are demanded in doing this, in order to avoid erroneous conclusions.

"'Marls deemed equally good with the kind showing the efflorescence, very frequently occur, exhibiting none of the white incrustation.

"'It does not seem that any general rule can be given for distinguishing the fertilizing properties of a marl by its mere color, as it must appear from what has been said, that the peculiar shade of color is frequently owing to the color of the intermingled clay. When the mass, however, is comparatively free from clay or common sand, and consists of little else than the green sand, observations go to show that the rather dark green variety is more potent in its effects than the very light green which sometimes overlies it.

"'The presence or absence of shells I look upon to be a point of but little moment, for I find that several of the most active marls in the region show no traces of fossils. The whole amount of carbonate of lime in the shape of fossils, and in that of the occasional white incrustation upon the grains, can in very few instances amount to one per cent.; while, as analysis shows, that lime chemically combined with the other ingredients in the green grains, is sometimes one per cent., and the potash nearly twelve per cent.'"

The following facts are stated by Professor Rogers, in proof of the value of this manure:

"Mr. Woolley manured a piece of land in the proportion of two hundred loads of good stable manure to the acre, applying upon an adjacent tract of the same soil his marl in the ratio of about twenty loads per acre. The crops, which were timothy and clover, were much heavier upon the section which had received the marl; and there was this additional fact greatly in favor of the fossil manure over the putrescent one, that the soil was also entirely free from weeds, while the stable manure had rendered its own crop very foul.

"This green sand stratum at Poplar Swamp seems to be almost entirely free from any sulphate of iron or other astringent material, and as a consequence the crops seem not to be scorched by an extra dose, however lavishly applied.

"There can be no doubt that twenty loads of marl per acre must be regarded as an unnecessarily bountiful dressing; but, computing the relative cost of the two manures, when employed in the ratio above stated, we find a considerable disparity in favor of the green sand. Placing the home value of farm-yard manure at one hundred cents for each two-horse load, and that of the marl at twenty-five cents per load, we have the expense of manuring one acre two hundred dollars; of marling the same, five dollars.

"This being an experiment, an extravagantly large dressing of manure was employed, but not exceeding the usual average application more than the twenty loads of marl surpassed what was necessary.

"Experience has already shown that land once amply marled retains its fertility with little diminution for at least ten or twelve years, if

care be had not to crop it too severely; while with all practicable precaution the stable manure must be renewed at least three times in that interval to maintain in the soil a corresponding degree of vigor.

"At the Squankum pits, which are very extensive, the marl is sold at the rate of thirty-seven and a half cents the load, the purchaser having to dig it. It is transported by wagons to a distance, in some directions, of twenty miles, and retailed, when hauled that far, at the rate of ten, or even twelve and a half cents per bushel, being very profitably spread upon the soil in the small proportion of twenty-five or even twenty bushels to the acre."

As to the quantity, and manner of application, Professor Booth in his report of the geological survey of the State of Delaware, remarks:

"In what manner and in what quantity should the green sand be applied? All varieties of the marl are more or less compact, when freshly extracted from the pit, and if applied in such a state, would be unequally distributed over the soil; and hence the first precaution is to suffer it to be exposed to the air for a few days, according to its compactness or tenacity, in order that it may crumble to powder, if possible; for the finer the pulverization, as shown of lime, the greater will be the immediate benefit. There is another advantage attending this delay, that we may then observe the efflorescence, and obviate its ill effects by lime. Indeed, in a majority of cases, the addition of lime in small quantity will prove serviceable, since it is generally wanting in the pure green varieties, and yet it is an important requisite in the fixed constituents of vegetables. The most economical method of applying the marl as above proposed, will be to cart it from the pits immediately into the fields to which it is to be applied, to throw it into heaps at convenient distances for spreading, and then to put a small quantity of lime on each heap, which should remain exposed to the air for a longer time. In regard to the quantity to be applied, a variety of opinions exist; and hence from fifty to one thousand bushels per acre have been tried, with and without success. A little attention to the theory of its operation will enable us to approximate to the true proportion. Its strong bases appear to act on the organic matter in the soil, and to combine with it; hence it would be useless to apply a large quantity to a poor and light soil, for which sixty to one hundred bushels would suffice; but a clayey soil would be rendered looser by it; and as there is usually more organic matter present in such a case, from one hundred to two hundred may be employed with advantage. Where the land is already of good quality, from two hundred to five hundred may be used, according to its richness and tenacity. Many persons believe that because one kind of marl is inferior to another, a much larger quantity will be required; but the truth is, that the differences, although important, are less so than is generally believed, and should not lead to the employment of quantities greater than have just been enumerated. Notwithstanding the effects of marl will be shown to be striking on ordinary, and even on very poor land, yet it is essential that the soil should contain a fair proportion of organic matter, in order to reap the highest benefit from it. Hence the failure of some experiments made with the green sand; for, although it stands superior to lime in requiring the presence or addition of less organic manure, still the views offered to explain its mode of action show the necessity of some organic materials on which to operate, and this conclusion is strengthened by experience.

"The difficulty of overcoming prejudice is clearly exemplified in the progressive employment of green sand in Delaware. One of the first experiments made with it in St. George's hundred may probably be dated as far back as the year 1826, when a small quantity was drawn out from the site of the canal. One spot of ground where this was applied was observed in 1837 on the farm of James Wilson, eleven years after its application; and although that soil had received no other assistance, a luxuriant growth of corn clearly pointed out the limit to which it had been spread."

PAYMENT IN ADVANCE.

We have always been satisfied of the policy, we might almost say, necessity, of requiring payment in advance for a dollar paper; but last year we were overpersuaded to adopt the plan of giving a credit of sixty days. To insure the payment of the dollar, we fixed the price of the paper at one dollar and fifty cents, unless the payment was made within the sixty days. We found the penal clause totally inoperative in practice. We felt as much repugnance to demand, as our subscribers did to pay, the extra fifty cents, and in no one case did we ever receive it, and yet there were hundreds of cases, not only where the penalty was incurred but where the subscription is still due us. Experience having thus satisfied us of the advantage of the old rule, of payment in advance, we adopted it for the present volume. We have received several communications from some of our best friends, expressing the opinion that in doing so we had committed an error. They are afraid we will give offence to some of our subscribers, and they think we overrate the trou-

ble and loss that we anticipate from the necessity of dunning our subscribers for so small a sum. Only for the purpose of affording them an opportunity of seeing to what we are sometimes subjected when we ask for payment after the service is rendered, we publish the following letter, received by the mail this morning:

"C. T. Botts:

"*Sir*,—As you offered the postmaster fifty cents to collect the pitiful sum of one dollar and fifty cents, my subscription to the Planter, I enclose you one dollar and keep fifty cents for my trouble, and will be very much obliged to you to discontinue it, as it is of no account to me and very little to others.

Yours, J. H. Taylor.

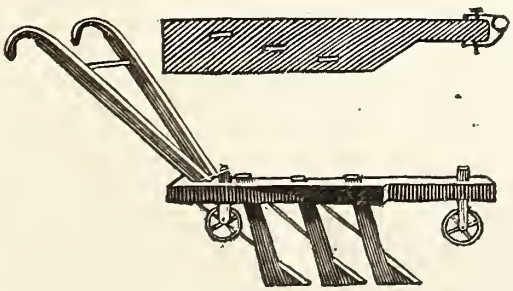
Union Village, Va., Dec. 16, 1843."

We have stated, that in no case had we demanded or received more than the dollar. But at the end of the year, finding several hundred dollars still due us, (much of it, no doubt, from the most excusable forgetfulness on the part of subscribers) we were compelled to make out the bills and send them to somebody for collection. Of course, we could ask no such favor of any one as to collect these bills without charge; we, therefore, offered the several postmasters the extra fifty cents to which we were justly entitled, if they chose to charge it, for making the collection. It is this which has excited the spirit which evidently dictated Mr. Taylor's letter.—After permitting this "pitiful sum" to remain due for nearly twelve months, he takes offence at our offering the postmaster one-third of it to make the collection. We think the postmaster would have had much more reason to complain, if we had done as we suppose Mr. Taylor would have had us, asked him to do it for nothing.

All these disagreeable consequences are avoided by requiring the payment in advance, and to this rule we mean most tenaciously to adhere hereafter. If any friend feel inclined to take offence at our failing to send him the paper without the money, we hope he will reflect upon the necessity of our establishing some general rule, and the confusion that would ensue from deviating from it in particular instances.

We must say, however, that about the richest thing of the season is, the idea of Mr. Taylor's charging us this commission for collecting the debt of himself. On the whole we are perfectly satisfied, and consider Mr. Taylor's charge quite moderate for the "trouble" he must have had in making the collection.

SUB-SOIL PLOUGH.



The subject of sub-soil ploughing has attracted great attention in this country as well as in Europe; its beneficial effects are universally admitted, but the operation is complained of as tedious and laborious in the extreme. To overcome these difficulties, Yankee ingenuity has originated several modifications in the implement; one of them is described in the following letter to the Editor of the "American Agriculturist." We are not altogether satisfied with this plough of Mr. Cornell's, and we extract the article in part as a provocative to communications from some Virginia farmers who we understand have been using, with great success, an implement probably better calculated, at least, for our own mode of farming.

Messrs. A. B. & R. L. Allen,—Having become satisfied of the utility of sub-soil ploughing, and equally well satisfied that the heavy, ungainly English plough, hitherto introduced into this country, is not well calculated for the purposes of the American farmers, I herewith give you a rough sketch of a sub-soil plough, that I think will perform the office of loosening the sub-soil in a better manner than any with which

I am acquainted. It consists of three coulters set in a beam, one twelve inches in advance of the other, and varying four inches from a right line, as is seen by the mortices in the top view of the beam, in the sketch.

It will work best to follow in the furrow of the common plough, cutting a twelve inch furrow. It may be guaged to a suitable depth by raising or lowering the wheel. The clevis should be so arranged that the line of draught will be in line with the left side of the beam, which will allow the plough to keep its place in the furrow, when the team follows the furrow of the surface soil plough. The manner in which the coulters are set, will prevent clogging, and assist in the performance of the work, as each coulter has a slice of four inches only to pare off or loosen, in most soils. One pair of horses would be team enough to plough six or eight inches deep, with the above plough. If you have one team with the surface soil plough working seven inches deep, and one on the sub-soil plough working eight inches, this would stir the ground to the depth of fifteen inches. Where it is desirable to go deeper, I would plough eight, nine or ten inches deep with the surface soil plough, and the same depth with the sub-soil plough.

The coulters are made of wrought iron, with steel points, and when they become dull they can be taken out and sharpened by any blacksmith that can shoe a horse. The price of a sub-soil plough, with three teeth, as above, would be about $10, one with four teeth, $12.

Yours, &c. E. Cornell.

AGRICULTURAL ADVANTAGES OF VIRGINIA.

It is with great pleasure we lay the following letter, addressed to the Editor of the American Agriculturist, before our readers. The author, formerly of Spottsylvania county, is well known to many of our readers as one of the most intelligent and valuable citizens that the "Old Dominion," in her unbounded generosity, has ever bestowed upon her sister States. Hundreds who have arrived at the estate of manhood since his removal from his native State, and who formerly bore towards him the relation of pupil to teacher, entertain for his memory sentiments of the most unbounded esteem and veneration. To the agricultural world Mr. Lewis is known as one of the most distinguished writers, and the most practical farmer of his day. He is residing probably in one of the most desirable parts of one of the richest States of the West; at any rate he is intimately acquainted with that country and with this, and yet he does not hesitate to speak of lower Virginia as fully equal, all things considered, to any country he has ever seen. Will not the western emigrant pause before such testimony, from such a source? Indeed the whole current of public opinion abroad confirms the idea that we have so strenuously endeavored to inculcate, that Virginia is a place rather to be emigrated *to*, than *from*.

We were fortunate enough to make the personal acquaintance of Mr. Lewis during the last summer, and though for his agricultural communications in the general, he could find no more worthy or suitable organ than the "Agriculturist," yet we had hoped, that when the subject was so peculiarly our own, he would not have forgotten, that there was a journal published in his native State, that would always be proud and happy to afford him the means of direct communication with the friends and associates of his early days.

Llangollen, Ky., Oct. 23, 1843.

Dear Sir,—After a lapse of eleven years, I have paid a visit to Virginia, my native State. Feeling a deep and filial interest in her prosperity, and in the welfare of her inhabitants, many of whom are my relations and friends, and all of them a noble race of generous, hospitable, and patriotic men, my attention was naturally turned to their *agricalture*—the basis of national prosperity, individual comfort, and independence.

When I left the State, a rapid tide of emigration to the south and west, was sweeping away much of her population and wealth, especially from the seaboard, and that portion of the State lying between the southwest mountains, and the head of tide-water in her fine navigable rivers. These are the sand-stone, quartz, and granite regions of Virginia; in many places underlaied by fine argillaceous earth. From the base of the southwest or little mountains westward, and from the valley, there was less emigration. Their argillaceous, calcareous, and slaty lands, adapted to wheat, grass, tobacco, and corn, withstood more firmly the impoverishing effects of a system of cultivation, which, though not so defective as that practised in the lower country, was far from the best now in use. Gypsum and clover found their way into the counties of Loudoun, Albemarle, and other upland counties, long before I left the State. Timothy and other grasses for grazing, as well as for the scythe, were cultivated in the valley. But in the lower country, although a clover *patch* for soiling was common, and timothy and herdsgress for meadows, especially near the towns, were scattered through the State, there were but few *fields* of clover laid down for the improvement of the soil, and the timothy meadows were soon supplanted by *broom-straw*. To Col. John Taylor, of Caroline, Lower Virginia

is more indebted for his *Arator* and his agricultural conversations, than even the United States are for his political writings; and to Mr. Ruffin, the Editor of the Farmers' Register, and the author of the essay on Calcareous Manures, the people of Lower Virginia, and indeed of the whole tide-water country on the Atlantic seaboard, owe a large debt of gratitude.

In the Valley (fine limestone and slate lands,) the grasses and clover, together with wheat and corn, are extensively cultivated. Large herds of cattle and hogs are raised or fed for market, and the improvement of their lands is in exact proportion to the attention paid to grasses and clover, and the observance of an ameliorating rotation of crops.

On the southern side of the Southwest mountains, clover, tobacco, wheat and corn, constitute the staples. I call clover one of the staples, because I consider it the basis of all good and profitable cultivation in that region; and it is certainly more extensively used than when I left the State. Hence the lands of those who use it are improving.

In the upper end of Louisa county, there are between ten and twelve thousand acres of land, (once in my opinion the bottom of a lake drained by the South Anna, one of the branches of the Pamunkey river,) remarkable for the production of wheat. There is perhaps no equal area of finer land for wheat in the world. They are called the *Green Springs* land. Mingled with the gray argillaceous loam of these lands, there is much comminuted shot-iron ore. Can it be that this, disintegrating and mixing with the soil, attracts and fixes the ammonia, thus rendering the land so suitable for wheat? The intelligent landholders here use clover and grasses, and their lands are improving beyond their great natural fertility.

For some twenty miles below the Green Springs, the lands are very unequal in quality, and in the degree of improvement. Some judicious farmers, husbanding their manure, and cultivating clover, although growers of tobacco, are improving their lands. But the majority, I fear, are still pursuing the old ruinous system of exhausting crops without proper rotation, and without cultivated grasses to cover their naked fields. Such, when their lands are worn to the bone, and from the want of returns to the soil, will be forced to emigrate. These lands are quartz ore, with much silicious gravel.

Passing lower down, there is a strip of land on both sides of the North Anna, in Spottsylvania and Louisa counties, and the lower part of Orange, known as *the Forks* and *Ducking-Hole* neighborhoods, in which the lands are essentially different from the quartz ore and silicious lands above and below them. They are undulating and hilly, with boulders of granite and gneiss, I believe, scattered sparsely over the lands, but in greater abundance near the North Anna. Much of this disintegrated rock is mingled with the argillaceous loam, and wherever it appears, the lands are productive in their original state, capable of easy and great improvement, and very lasting. Every particle of manure tells, and every leaf of clover adds to the fertility of this fine land. Its owners are becoming aware of its comparative value. Many of them are improving it steadily with clover and manures, and they are *reaping* the rich rewards of their labor.

From this strip of land to the head of tide-water on the rivers, the lands are more sandy, and poorer, except on the streams, where the bottoms are rich alluvial, and the hill-sides facing the streams, good tobacco lands, where they have not been worn out by successive crops, without returns of animals or vegetable matter to the soil. In this section of the State, there has been less general improvement than above or below, although I know that clover and gypsum, as well as barn-yard manure, ensure good returns for their liberal use. The spirit of improvement has reached some of the farmers and planters in this region; but they are rare exceptions to the general rule. Corn, wheat, and tobacco are the staples.

Below the head of tide-water, great improvement on many farms has been the result of *marling*, and the successful introduction of the cultivated grasses and clover. You have doubtless seen an account of the wheat crop at Westover, and other places on James river, averaging thirty bushels to the acre. The use of marl, and the practice of covering the fields with grasses, is extending in all that region, so that the first lands settled in Virginia, and greatly exhausted by injudicious cultivation, are now, in my opinion, becoming the most valuable lands in the State. The means of improvement are as inexhaustible as the marl-banks; and the facilities of transportation, both for this, as well as for the productions of the farms, greater than in any other portion of the State.

The ploughs and farming tools generally are much improved since I left the State. Good rollers, threshing machines, and reaping machines, are now in use. Two of the latter, one of which I saw, have been used near Richmond the last season, and I heard both spoken of as answering well. They are Hussey's, and M'Cormick's.

I was particularly struck with the improved style of farming in the neighborhood of Richmond. They have discovered that their lands, even those that are very sandy, can, by judicious management, be covered with grass. And this is the basis of agricultural improvement. Whenever the fields can be covered with a good coat of grass, so great a return of vegetable matter and manure from the animals consuming it,

either on the fields or from soiling, or in the form of hay, is, or may be made to the lands, that with a judicious rotation of crops, instead of wearing out or deteriorating, the lands will become richer and more productive. The alluvial lands below tide-water were naturally very fertile, and those that were exhausted from long and unchanged crops, are, I believe, now recovering their pristine fertility under a better system. What a fine country it is! and what a fine race of men inhabit it!—Intellectual, brave, generous, and hospitable. There are no men in the world superior to the descendants of the cavaliers in Old Virginia. Many of them have removed to the west and the south, actuated by the spirit of adventure, or driven by necessity, or lured by the wiles of land speculators, or dazzled and blinded by the brightness of better lands beyond the mountains. Let those who remain in Lower Virginia, and who can now barely live on their lands, instantly begin to improve them. They are *easily improved;* and when improved, are more valuable than any they will obtain farther from the seaboard at the price of their improvements. Let them bear in mind, that land which brings only ten bushels of wheat, or twenty of corn to the acre, *where* these articles can be sold for ten dollars per acre only, is more valuable for cultivation, than land which will bring double those quantities, where the *prices* for them will be less for the produce of an acre. When oats were worth thirty cents a bushel, and corn fifty cents, in the city of Richmond, we could with difficulty obtain twelve cents for oats, and twenty cents for corn. Last year corn sold at twelve cents per bushel in Louisville.

Many years ago, the Hon. James M. Garnett, one of nature's noblemen, whose death we have been lately called to deplore, in an address to the Agricultural Society of Fredericksburg, of which I was at that time a member, stated some cases in which manure from cow-pens, I think, permitted to remain on the surface for some time before it was mingled with the soil by ploughing, seemed to produce a more beneficial effect on the crop, than when immediately turned under. The idea was considered novel at that time. But in conversing with a very intelligent, observing, practical farmer near Richmond, during my late trip to Virginia, he assured me that his own experience had convinced him of its truth. And I observed in returning home, that many of the excellent farmers in Lancaster county, Pennsylvania, through which I passed on the way from Philadelphia to Pittsburg, plough their lands first, then scatter the lime and manure and then barely mingle them with the surface-soil, by a light second ploughing, instead of turning them deeply under. Now, as these men are successful practical tillers of the earth, I presume they would not pursue a system in the application of manure, unless *experience* had demonstrated its advantages. Is more fertilizing matter attracted from the atmosphere than is lost by evaporation?

I had no adequate idea of the quantity of lime used in the agriculture of Pennsylvania, till I passed through the State, and saw the numerous lime-kilns, and the piles of lime in the fields. What this substance is effecting for the interior, *marl* is doing for the seaboard. But the facilities of transportation, without the payment of tolls on turnpikes or railroads, gives a decided advantage to the dwellers on the navigable rivers, bays, and shores of the Atlantic.

With due attention to a proper rotation of crops, the collection and application of manure, marl, green sand, and lime, with, in all cases, a good cover of grass or clover, when the fields are not in summer cultivation, the land from Boston to Florida point, in my humble opinion, will be the most valuable in America; and certainly none along this extended line more valuable for soil, climate, or the productions to which they are adapted, than those of Lower Virginia. Let them appreciate their natural advantages, and improve them, and they need not encounter the toil, anxiety, and expense of removal to other localities less favored in all respects except one—richer land, less productive of profit though than theirs, if only moderately improved and properly cultivated. JOHN LEWIS.

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